Table of Contents: Volume 23 (1997)

Number 1

Number of Solutions for Motion and Structure from Multiple Frame Correspondence ..... *Robert J. Holt and Arun N. Netravali* 5

The Critical Sets of Lines for Camera Displacement Estimation: A Mixed Euclidean-Projective and Constructive Approach ..... *Nassir Navab and Olivier D. Faugeras* 17

SUSAN—A New Approach to Low Level Image Processing ..... *Stephen M. Smith and J. Michael Brady* 45

Topographical Properties of Generic Images ..... *J.H. Rieger* 79

Topological Reconstruction of a Smooth Manifold-Solid from Its Occluding Contour .. *Lance R. Williams* 93

Number 2

Following Cusps..... *Roberto Cipolla, Gordon Fletcher and Peter Giblin* 115

Efficient Pose Clustering Using a Randomized Algorithm ..... *Clark F. Olson* 131

Computing Local Surface Orientation and Shape from Texture for Curved Surfaces ..... *Jitendra Malik and Ruth Rosenholtz* 149

Computing Size Functions from Edge Maps ..... *Claudio Uras and Alessandro Verri* 169

The Quadric Reference Surface: Theory and Applications ..... *Amnon Shashua and Sebastian Toelg* 185

Number 3

Singularities of Illuminated Surfaces..... *L. Donati and N. Stolfi* 207

The Generic Bilinear Calibration-Estimation Problem..... *Jan J. Koenderink and Andrea J. Van Doorn* 217

Sequential Updating of Projective and Affine Structure from Motion ..... *P.A. Beardsley, A. Zisserman and D.W. Murray* 235

Detection and Recognition of Periodic, Nonrigid Motion..... *Ramprasad Polana and Randal C. Nelson* 261

3D Pose Estimation by Directly Matching Polyhedral Models to Gray Value Gradients ..... *Henner Kollnig and Hans-Hellmut Nagel* 283